

Biotechnology business models for Asian agribusiness SMEs

The agricultural biotechnology industry is relatively new, but its potential impact on agriculture and food security is significant. Often the source of agricultural biotechnology innovations is SMEs, although multinational companies involved in commercial seed production, animal vaccines, biopesticides, and genetically modified organisms have gained the most economic benefit. There is a need to expand the benefits of biotechnology among agribusiness SMEs, but this will require the adoption of appropriate biotechnology-based business models as there is no standard model for success.

Asian SMEs confront limited funding, high regulatory costs, legal hurdles in the regulatory process, nonconductive policy environment, and low capacity to absorb risk. Nevertheless, the Republic of China (ROC) successfully created conducive economic and policy environments to capitalize on technology created through active R&D. To learn firsthand from the most promising biotechnology-based agribusiness SMEs in the ROC, the APO in collaboration with the China Productivity Center organized a multicountry observational study mission on the Development of Biotechnology Business Models for SMEs in Agribusiness, held in Taipei, Pingtung, and Taichung, 7–11 November 2011. Twenty-two participants from 11 member countries and five resource persons from Singapore and the ROC attended.

The topics covered were: overview of the agribiotechnology industry in the Asia-Pacific; new biotechnology product development; risk management by agribiotechnology-based SMEs; business models for the development of agribiotechnology SMEs in the ROC;

policy, regulatory, and institutional settings to stimulate biotechnology-based agribusiness SMEs; and successful examples of agribiotechnology business and their key success factors. The participants also presented case studies on agribiotechnology businesses from their countries.

To learn firsthand how different business models have been adopted by promising biotechnology-based agribusiness SMEs in the host country, participants visited Grape King Inc.; Pingtung Agricultural Biotechnology Park; KPC Products, Inc.; GeneReach Biotechnology Corp.; and the Animal Technology Institute Taiwan. They also formulated recommendations and action plans for capacity building of agribiotechnology SMEs in the Asia-Pacific region, of which the most critical will be changing mindset of policymakers and planners, as well as public perception of the safety of the agribiotechnology products. 🌱



Dr. Jiunn-Nan Chu, R&D Assistant Manager of Advanced Green Biotechnology Inc., demonstrating the effectiveness of biofertilizers in experimental greenhouse bok choy.